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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/507,236	02/18/2000	John G. Ellis	081862.P163	9691

7590 01/31/2007  
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EXAMINER
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MEHRA, INDER P

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/31/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

09/507,236

Applicant(s)

ELLIS, JOHN G.

Examiner

Inder P. Mehra

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 1/16/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,5-13 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-13 and 15-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7. 6) ☐ Other:

***Response to Amendment***

1. This is in response to an amendment dated 1/16/2007 which has been fully considered and made of record. Based on this amendment, claims 2-4 and 14 have been cancelled, claims 15-19 have been added, claims 1, 5-13 and 15-19 are now pending.. Based on this amendment, claims 1 has been amended.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, and 5-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Brueckheimer et al** ('261), in view of **Gibbs et al** (US Patent No. 6,683,877), hereinafter, **Gibbs**, further, in view of **Caves et al** (US Patent No. 6,665,300), hereinafter, **Caves**.

For claims 1, 5-6 and 11, **Brueckheimer** ('261) discloses, in reference to fig. 1, a method comprising:

Art Unit: 2617

- dynamically (**Brueckheimer discloses “the VC –can be resized dynamically,-  
-while VC is continually active”, refer to col. 2 line 49-51), establishing ATM  
adaptation layer 2 (AAL-2) channel identifiers (CIDs), (Brueckheimer  
discloses “each circuit is identified uniquely by the combination of ---CID,  
and VC number---”, refer to col. 2 lines 51-55), on a call-by-call basis,  
(Brueckheimer discloses “common channel signaling involves ---reserved  
for call connection messages” (which means “on a call-by-call basis”), refer  
to col. 5 line 67 through col. 6 line 10. Further, Brueckheimer discloses  
“service types”, refer to abstract; AAL2 in col. 1 line 4-6, col. 1 line 44, col.  
2 lines 40-60, col. 3 lines 25-26), using ATM standards-based call control,( col.  
1 lines 53-55), signaling protocol (col. 5 line 65-col. 6 line 9);**

Brueckheimer (‘261) does not disclose expressly the following limitation, which is  
disclosed by Gibbs, as follows:

- “mapping the common CID to virtual path /virtual channel (VP/VC), (Gibbs  
discloses expressly and explicitly, “permanent virtual channel connections  
(VCC) are defined by respective virtual circuit indicators (VCCI), refer to  
col. 6 lines 1-3; further discloses, “ protocol can directly referred to the  
VCC in terms of---VPI---VCI-----alternatively, VCC is established, refer to  
col. 6 lines 25-45, col. 7 lines 3-7), that forms part of a virtual user network  
interface (UNI) to an ATM network, (refer to col. 7 , lines 53-55, and col. 7  
lines 42-46, .”)

Art Unit: 2617

- wherein the standards based ATM call control protocol is selected from the list comprising UNI 3.1/4.0 and Q.2931”, as recited by claim 6, refer to col. 7 lines 42-46.

Brueckheimer ('261) in view of Gibbs does not disclose expressly the following limitation, which is disclosed by Caves, as follows:

- dynamically establishing ATM adaptation layer 2 (AAL2) virtual channel connection (VCC) channel identifiers (CIDs) on a call-by-call basis---, (Caves discloses, **“Dynamic control maintains the following records: CID values that are allocated but currently unassigned to AAL2 connections; CID values currently assigned to AAL2 connections; Pre-assigned CID values that are currently activated Pre-assigned CID values that are currently deactivated Pre-assigned CID values are equivalent to ‘nailed up’ AAL2connections. These may be ‘activated’ when required to carry data between the two end-points (call-by-call basis) permanently associated with the connection and ‘deactivated’ when not required., refer to col. 4 lines 29-41).**

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of mapping CID with VPI/VCI forming part of user network interface UNI to an ATM network. The mapping of channel identifier (CID) to VPI/VCI can be implemented by combining the system as taught by Gibbs with Breuckheimer et al ('261) at the user network interface (UNI) to an ATM network. Limitation “dynamically establishing AAL2

Art Unit: 2617

on call-by-call basis is disclosed by Caves also. The suggestion/motivation to do so would have been to match the traffic types and quality of service requirements.

5. For claim 11, Brueckheimer ('261) discloses, in reference to fig. 1, a method comprising:

Brueckheimer ('261) discloses, in reference to fig. 1, a method comprising:

- computer-readable instructions, which when implemented by a processor, cause the processor to provide end to end AAL2 switched virtual circuit voice service over a core ATM network, **(Brueckheimer ('261) discloses, “an ATM adaptation processor providing an interface to the ATM network, refer to col. 3 lines 57-58);**

Brueckheimer ('261) does not disclose expressly the following limitation, which is disclosed by Gibbs, as follows:

- network access gateways to said core ATM network, **(Gibbs discloses, “gateways, refer to fig. 1 (only fig.), and col. 5 lines 55-60);**
- network edge devices that convert between voice channels and AAL2 streams, the latter used to communicate with the gateways, by configuring an originating network edge device to set up a call with a destination network edge device using an ATM Forum promulgated signaling protocol that specifies procedures for establishing, maintaining, and clearing network connections, **(Gibbs discloses “voice code conversion”, col. 1 lines 50-51 and further discloses “voice traffic is transported on AAL2 layer”, col. 5 line 65 through col. 6 line 9, wherein traffic is transported in ATM calls, col. col. 4 lines 33-37, )**

and (Gibbs discloses, “a media gateway for use in a broadband network arranged to carry both voice and data traffic, and having means for setting up a voice connection over a virtual channel connection within a bundle of virtual channel communications in an ATM trunk group, the gateway having means for selecting or creating a said virtual channel connection, and means for signalling to a similar gateway a session descriptor incorporating the identity of that virtual channel connection, refer to col. 4 lines 22-30).

- wherein the originating network edge device maps a respective virtual path/virtual circuit (VP/VC) that is referenced in a cell header in accordance with the ATM forum promulgated signaling protocol, to a channel identifier (CID) of a designated AAL2 virtual channel connection (VCC) , ((Gibbs discloses expressly and explicitly, “permanent virtual channel connections (VCC) are defined by respective virtual circuit indicators (VCCI), refer to col. 6 lines 1-3; further discloses, “ protocol can directly referred to the VCC in terms of---VPI---VCI-----alternatively, VCC is established, refer to col. 6 lines 25-45, col. 7 lines 3-7), that forms part of a virtual user network interface (UNI) to an ATM network, (refer to col. 7 , lines 53-55, and col. 7 lines 42-46, .”); and
- sends this signaling information formatted in accordance with said ATM Forum promulgated signaling protocol to one of the network access gateways,(Gibbs discloses, “Alternatively, where the VCC is locally established (SVCs

**signalled by the gateway through UNI or PNNI signalling, the VCC can be indirectly referred to in terms which are of significance to both ends of the VCC, i.e. the ATM address of the ATM device at each end of the VCC. However it is possible that there may be several VCCs for any given pair of ATM devices. Therefore the ATM address pair must be further resolved by a VCC identifier (VCCI) which is unambiguous within the context of the ATM address pair. Thus, the protocol can indirectly refer to the VCC in terms of "Remote GW ATM End System Address+VCCI", refer to col. 6 lines 29-40).**

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of mapping CID with VPI/VCI forming part of user network interface UNI to an ATM network. The mapping of channel identifier (CID) to VPI/VCI can be implemented by combining the system as taught by Gibbs with Breuckheimer et al ('261) at the user network interface (UNI) to an ATM network.. The suggestion/motivation to do so would have been to match the traffic types and quality of service requirements.

For claims 7-10, and 12-13, Breuckheimer et al ('261) discloses the following limitations of the subject matter:

- ***as recited by claims 9 and 13***, multiplexing the time division multiplexed communication channel to one or more AAL2 VPs/VCs, refer to col. 2 lines 42-49.

Art Unit: 2617

- *as recited by claim 10*, mapping the multiple AAL2 VPs/VCs to the CIDs prior to mapping the CIDs to the VP/VC, refer to col. 2 lines 52-55 and col. 10 lines 19-21.
- *as recited by claim 12*, computer readable instructions are embodied in a computer readable medium, refer to col. 13 lines 1-13.

Gibbs discloses the following limitation:

- *as recited by claims 7 and 8*, wherein the mapping is performed at a network edge device (gateway, fig. 1) communicatively coupled to the customer premises equipment, *as recited by claims 7 and 8* (end point, fig. 1)", refer to col. 6 lines 40-45.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capabilities of mapping and multiplexing to be performed at the edge device coupled to the CPE. The mapping and multiplexing of channel identifier (CID) to VPI/VCI can be implemented by combining the system as taught by Gibbs with Breuckheimer et al ('261) at the end point, as taught by Gibbs. The suggestion/motivation to do so would have been to match the traffic types and quality of service requirements.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ramaswamy et al** (US Patent No. 7,092,384), hereinafter, '384, in view of **Subbiah et al** (US Patent No. 6,449,276), hereinafter Subbiah, further in view of **Gibbs et al** (US Patent No. 6,683,877), hereinafter, Gibbs.

For claim 15, '384 discloses A network edge device (edge device, refer to col. 2 lines 20-

Art Unit: 2617

25 or “end points, col. 2 lines 52-55), comprising:

- means for receiving voice information from channels associated with customer premises equipment, ('384 discloses, This PVC carries all voice traffic as well as signaling traffic. The packet architecture used is ATM Adaptation Layer 2 (AAL2) for ATM encapsulation, refer to col. 2 lines 52-54).
- means for multiplexing the received voice information into AAL2 cells, ('384 discloses, “('384 discloses, “AAL2 has the ability to allow multiple connections multiplexed on one virtual circuit (VC). The multiplexing of multiple streams of data is done at the ATM Adaptation Layer. ATM adaptation only takes place at the endpoints of an ATM network”, refer to col. 2 lines 55-60);
- means for setting up a switched virtual circuit using an ATM forum user to network interface, UNI, ('384b discloses, “it is possible to setup the connection in the ATM switch using a switched virtual circuit, refer to col. 3 lines 59-61;

'384 does not disclose explicitly the following limitations, which are disclosed by Subbiah and Gibbs, as follows:

- means for mapping, in a manner that is transparent to the setting up means, a VP/VC that is associated with a UNI port to a CID on a designated AAL2 VCC (Subbiah discloses, in fig. 7, and col. 2 lines 10-12);
- that forms part of the UNI's virtual path between the network edge device and a network access gateway, (Gibbs discloses, “the VCC is locally established

Art Unit: 2617

**(SVCs signalled by the gateway through UNI or PNNI signaling), refer to col. 29-31).**

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capabilities of mapping and multiplexing to be performed at the edge device coupled to the CPE. The mapping and multiplexing of channel identifier (CID) to VPI/VCI can be implemented by combining the system as taught by Gibbs at the end point, as taught by Gibbs. The suggestion/motivation to do so would have been to match the traffic types and quality of service requirements.

***Response to Arguments***

7. Applicant's arguments filed 1/16/2007 regarding claims 1, 5-13 and 15-19 have been fully considered but they are moot in view of the new ground(s) of rejection.

Incidentally, Applicant did not respond/argue previous office action in "Remarks".

Art Unit: 2617

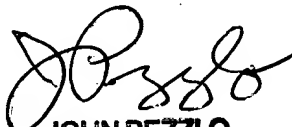
### Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P. Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Inder Pal Mehra 1/26/07*  
Inder P Mehra  
Examiner  
Art Unit 2617

  
JOHN PEZZLO  
PRIMARY EXAMINER